



chain nodes :

10 23 24 25 26

ring nodes :

1 2 3 4 5 6 7 8 9 11 12 13 14 15 16 17 18 19 20 21 22 28 29  
30 31 32 33

chain bonds :

1-11 2-23 6-10 10-26 13-30 15-21 23-24 23-25

ring bonds :

1-2 1-5 2-3 3-4 4-5 4-6 5-9 6-7 7-8 8-9 11-12 11-16 12-13 13-14 14-15  
15-16 17-18 17-22 18-19 19-20 20-21 21-22 28-29 28-33 29-30 30-31 31-32  
32-33

exact/norm bonds :

1-2 1-5 1-11 2-3 2-23 3-4 6-10 10-26 11-12 11-16 12-13 13-14 13-30  
14-15 15-16 15-21 17-18 17-22 18-19 19-20 20-21 21-22 23-24 23-25 28-29  
28-33 29-30 30-31 31-32 32-33

normalized bonds :

4-5 4-6 5-9 6-7 7-8 8-9

isolated ring systems :

containing 1 : 11 : 17 :

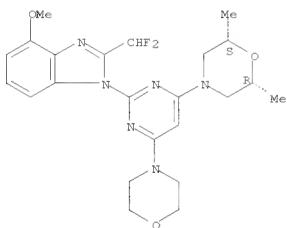
10/594, 994

L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 20071176627 CAPLUS  
 DOCUMENT NUMBER: 147:440304  
 TITLE: Treatment of prostate cancer, melanoma or hepatic cancer  
 INVENTOR(S): Yaguchi, Shinichi; Koshimizu, Ichiro; Yoshimi, Hisashi; Matsuno, Toshiyuki; Watanabe, Tetsuo; Tsuchida, Yoshiro; Saitoh, Kenichi  
 PATENT ASSIGNEE(S): Zenyaku Kogyo Kabushiki Kaisha, Japan  
 SOURCE: U.S. Pat. Appl. Publ., 8pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|----------------|------|----------|-----------------|----------|
| US 20070244110 | A1   | 20071018 | US 2006-404078  | 20060414 |
|                |      |          | US 2006-404078  | 20060414 |

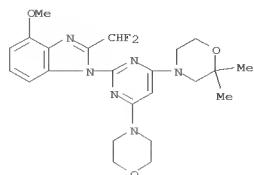
OTHER SOURCE(S): MARPAT 147:440304  
 IT 866392-54-3P 966392-55-4P 952481-20-8P  
 952481-22-0P 952481-23-1P 952481-24-2P  
 KL: PAC (Pharmacological activity); PRP (Properties); SFN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (Treatment of prostate cancer, melanoma or hepatic cancer)  
 RN 866392-54-3 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-[(2R,6S)-2,6-dimethyl-4-morpholinyl]-6-(4-morpholinyl)-2-pyrimidinyl]-4-methoxy-, rel- (CA INDEX NAME)

Relative stereochemistry.

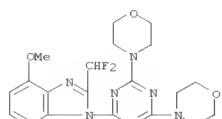


RN 866392-55-4 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-(2,2-dimethyl-4-morpholinyl)-6-

L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)  
 (4-morpholinyl)-2-pyrimidinyl]-4-methoxy- (CA INDEX NAME)



RN 952481-20-8 CAPLUS  
 CN 1H-Benzimidazole,  
 2-(difluoromethyl)-1-(4,6-di-4-morpholinyl-1,3,5-triazin-2-yl)-4-methoxy- (CA INDEX NAME)



RN 952481-22-0 CAPLUS  
 CN 1H-Benzimidazol-4-ol, 2-(difluoromethyl)-1-[4-[(2R,6S)-2,6-dimethyl-4-morpholinyl]-6-(4-morpholinyl)-2-pyrimidinyl]-, 4-acetate, rel- (CA INDEX NAME)

Relative stereochemistry.

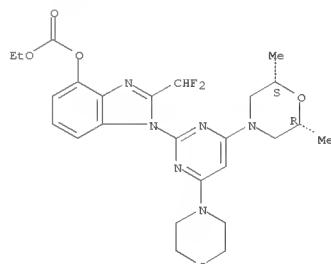
L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

RN 952481-23-1 CAPLUS  
 CN Carbonic acid, 2-(difluoromethyl)-1-[4-(2,2-dimethyl-4-morpholinyl)-6-(4-morpholinyl)-2-pyrimidinyl]-1H-benzimidazol-4-yl methyl ester (CA INDEX NAME)

RN 952481-24-2 CAPLUS  
 CN Carbonic acid, 2-(difluoromethyl)-1-[4-[(2R,6S)-2,6-dimethyl-4-morpholinyl]-6-(4-morpholinyl)-2-pyrimidinyl]-1H-benzimidazol-4-yl ethyl ester, rel- (CA INDEX NAME)

Relative stereochemistry.

L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

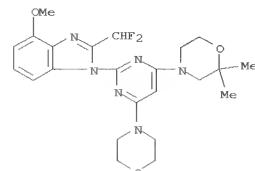


EXR: Michael Barker

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2006:945639 CAPLUS  
 DOCUMENT NUMBER: 145:328368  
 TITLE: Immunosuppressive agent and anti-tumor agent comprising heterocyclic compound as active ingredient  
 INVENTOR(S): Haruta, Kazuhiko; Yaguchi, Shinichi; Matsuno, Toshiyuki; Tsuchida, Yoshiro; Watanabe, Tetsuo; Yoshioka, Kimitomo; Yui, Ryogo  
 PATENT ASSIGNEE(S): Zenyaku Kogyo Kabushikikaisha, Japan  
 SOURCE: PCT Int. Appl., 102pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

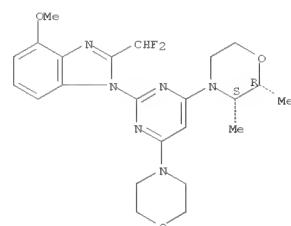
| PATENT NO.   | KIND         | DATE         | APPLICATION NO.  | DATE        |
|--|--------------|--------------|------------------|-------------|
| WO 2006095906  | A1           | 20060914     | WO 2006-JP304937 | 20060313    |
| WI: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TZ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |              |              |                  |             |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LZ, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CL, CM, GA, GU, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM   |              |              |                  |             |
| AU 2006221285  | A1           | 20060914     | AU 2006-221285   | 20060313    |
| CA 2599879   | A1           | 20060914     | CA 2006-2599879  | 20060313    |
| EP 1864665   | A1           | 20071212     | EP 2006-729002   | 20060313    |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LZ, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR  |              |              |                  |             |
| US 20080113987   | A1           | 20080515     | US 2007-847593   | 20070830    |
| IN 2007KN03220   | A            | 20080104     | IN 2007-KN3220   | 20070831    |
| CN 101137382   | A            | 20080305     | CN 2006-80007888 | 20070911    |
| KR 2007113285  | A            | 20071128     | KR 2007-723354   | 20071011    |
| PRIORITY APFLN. INFO.:   |              |              | JP 2005-69255    | A 20050311  |
| OTHER SOURCE(S): MARPAT 145:328368   |              |              | WO 2006-JP304937 | W 20060313  |
| IT 866392-55-4P  | 866392-56-5P | 866392-57-6P | WO 2006-JP4937   | A1 20060313 |
| RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)   |              |              |                  |             |
| (immunosuppressive agents and anti-tumor agents comprising heterocyclic compds.)   |              |              |                  |             |

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)  
 RN 866392-55-4 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-(2,2-dimethyl-4-morpholinyl)-6-(4-morpholinyl)-2-pyrimidinyl]-4-methoxy- (CA INDEX NAME)



RN 866392-56-5 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-(2R,3S)-2,3-dimethyl-4-morpholinyl]-6-(4-morpholinyl)-2-pyrimidinyl]-4-methoxy-, rel- (CA INDEX NAME)

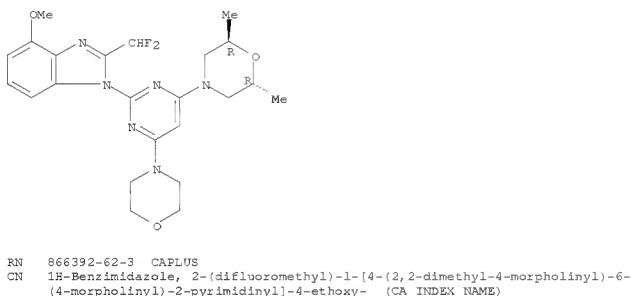
Relative stereochemistry.



RN 866392-57-6 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-(2R,6R)-2,6-dimethyl-4-morpholinyl]-6-(4-morpholinyl)-2-pyrimidinyl]-4-methoxy-, rel- (CA INDEX NAME)

Relative stereochemistry.

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)

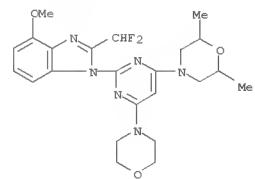


RN 866392-62-3 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-(2,2-dimethyl-4-morpholinyl)-6-(4-morpholinyl)-2-pyrimidinyl]-4-ethoxy- (CA INDEX NAME)



IT 909300-31-8  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (immunosuppressive agents and anti-tumor agents comprising heterocyclic compds.)  
 RN 909300-31-8 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-(2,6-dimethyl-4-morpholinyl)-6-(4-morpholinyl)-2-pyrimidinyl]-4-methoxy- (CA INDEX NAME)

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD  
 (9 CITINGS)  
 REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

**INSTANT**

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:1103774 CAPLUS  
 DOCUMENT NUMBER: 143:367324  
 TITLE: Preparation of 2-benzimidazolyl-4,6-dimorpholinylpyrimidine and 2-benzimidazolyl-4,6-dimorpholinyltriazine derivatives  
 INVENTOR(S): Kawashima, Seiichiro; Matsuno, Toshiyuki; Yaguchi, Shinichi; Tsuchida, Yoshio; Saitoh, Kenichi; Watanabe, Tetsuo  
 PATENT ASSIGNEE(S): Zenyaku Kogyo Kabushiki Kaisha, Japan  
 SOURCE: PCT Int. Appl., 19 pp.  
 CODEN: PIXXD2

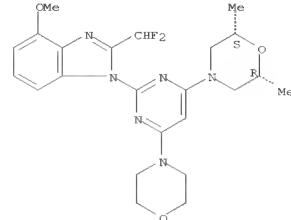
DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.   | KIND | DATE      | APPLICATION NO.  | DATE       |
|--|------|-----------|------------------|------------|
| WO 200509539   | A1   | 20051013  | WO 2005-JP6111   | 20050330   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KW, LZ, LK, LR, LS, LT, LU, LV, MA, MD, MG, MR, MN, MW, MX, MZ, NA, NI, NO, NG, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,<br>ZW |      |           |                  |            |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BD, CF, CL, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG   |      |           |                  |            |
| AU 2005227954  | A1   | 20051013  | AU 2005-227954   | 20050330   |
| CA 2561406   | A1   | 20051013  | CA 2005-2561406  | 20050330   |
| EP 17241714  | A1   | 20070110  | EP 2005-727794   | 20050330   |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR  |      |           |                  |            |
| CN 1972935   | A    | 20070530  | CN 2005-80010215 | 20050330   |
| KR 2007008670  | A    | 20070117  | KR 2006-722675   | 20061030   |
| US 20080287431   | A1   | 200801120 | US 2007-594994   | 20070117   |
| PRIORITY APFLN. INFO.:   |      |           | JP 2004-103273   | A 20040331 |
|  |      |           | WO 2005-JP6111   | W 20050330 |

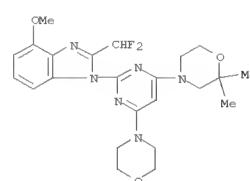
OTHER SOURCE(S): MARPAT 143:367324  
 IT 866392-54-3P 866392-55-4P 866392-56-5P  
 866392-57-6P 866392-58-7P 866392-59-8P  
 866392-60-1P 866392-61-2P 866392-62-3P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (drug candidate; preparation of 2-benzimidazolyl-4,6-dimorpholinylpyrimidine

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)  
 and 2-benzimidazolyl-4,6-dimorpholinyltriazine derivs. as antitumor agents)  
 RN 866392-54-3 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-[(2R,6S)-2,6-dimethyl-4-morpholinyl]-6-(4-morpholinyl)-2-pyrimidinyl]-4-methoxy-, rel- (CA INDEX NAME)

Relative stereochemistry.



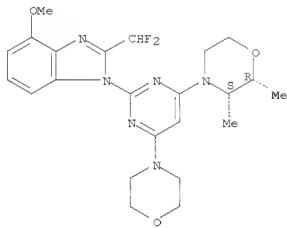
RN 866392-55-4 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-(2,2-dimethyl-4-morpholinyl)-6-(4-morpholinyl)-2-pyrimidinyl]-4-methoxy- (CA INDEX NAME)



RN 866392-56-5 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-[(2R,3S)-2,3-dimethyl-4-morpholinyl]-6-(4-morpholinyl)-2-pyrimidinyl]-4-methoxy-, rel- (CA INDEX NAME)

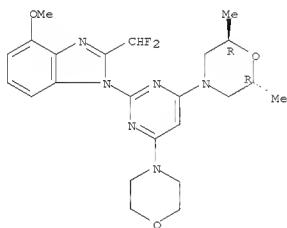
Relative stereochemistry.

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



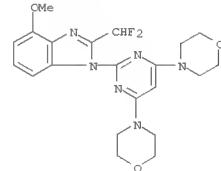
RN 866392-57-6 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-[(2R,6R)-2,6-dimethyl-4-morpholinyl]-6-(4-morpholinyl)-2-pyrimidinyl]-4-methoxy-, rel- (CA INDEX NAME)

Relative stereochemistry.



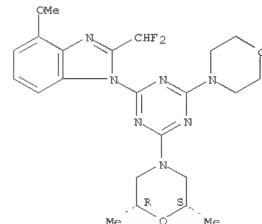
RN 866392-58-7 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-1-(4,6-di-4-morpholinyl-2-pyrimidinyl)-4-methoxy- (CA INDEX NAME)

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 866392-59-8 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-[(2R,6S)-2,6-dimethyl-4-morpholinyl]-6-(4-morpholinyl)-1,3,5-triazin-2-yl]-4-methoxy-, rel- (CA INDEX NAME)

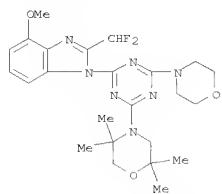
Relative stereochemistry.



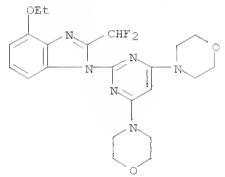
RN 866392-60-1 CAPLUS  
 CN 1H-Benzimidazole, 2-(difluoromethyl)-4-methoxy-1-[4-(4-morpholinyl)-6-(2,2,5,5-tetramethyl-4-morpholinyl)-1,3,5-triazin-2-yl]- (CA INDEX NAME)

10/594, 994

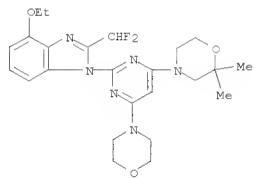
L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 866392-61-2 CAPLUS  
CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-(4-morpholinyl-2-pyrimidinyl)-4-ethoxy- (CA INDEX NAME)



RN 866392-62-3 CAPLUS  
CN 1H-Benzimidazole, 2-(difluoromethyl)-1-[4-(2,2-dimethyl-4-morpholinyl)-6-(4-morpholinyl)-2-pyrimidinyl]-4-ethoxy- (CA INDEX NAME)



L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN (Continued)  
OS CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS  
RECORD  
REFERENCE COUNT: 16 (4 CITINGS)  
THIS THERE ARE 16 CITED REFERENCES AVAILABLE FOR  
RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

EXR: Michael Barker